

ABSTRACT OF THE INVENTION

NON-OLIGOMERIZING TANDEM FLUORESCENT PROTEINS

A chimeric phosphorylation indicator is provided. A chimeric phosphorylation indicator can contain a donor molecule, a phosphorylatable domain, a phosphoaminoacid binding domain (PAABD), and an acceptor molecule. A chimeric phosphorylation indicator also can contain a phosphorylatable polypeptide and a fluorescent protein, wherein the phosphorylatable polypeptide is contained within the sequence of the fluorescent protein, or wherein the fluorescent protein is contained within the sequence of the phosphorylatable polypeptide. Also provided are polynucleotides encoding such chimeric phosphorylation indicators, as well as kits containing the indicators or the polynucleotides. In addition, a method of using the chimeric phosphorylation indicators to detect a kinase or phosphatase in a sample is provided.